

INTRODUCTION TO EEA's Gas Market Model

**U.S. House of Representatives
Committee on Science**



**Presented by:
E. Harry Vidas
Energy and Environmental Analysis, Inc.
July 8, 2004**

Model Overview

- EEA's model is a general equilibrium representation of gas markets throughout North America.
- The model simulates North American gas markets on a monthly basis, solving for gas demand, production, storage activity and prices within many regions and nodes.
- Creates a monthly balance of gas supply and demand at over 120 market locations integrated by an extensive pipeline network.
 - Balance includes pipeline flows and storage injections and withdrawals at each location.

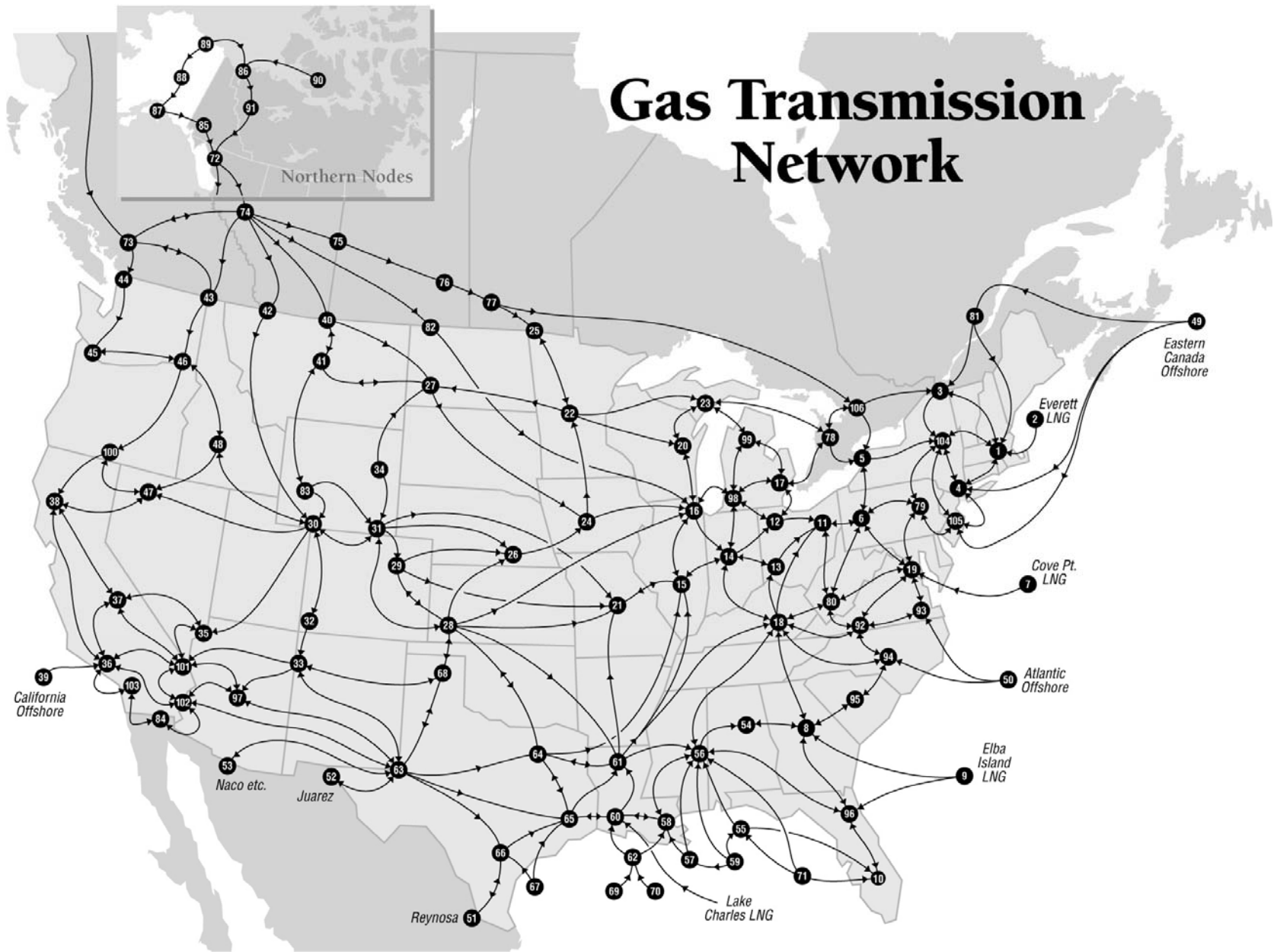
Monthly Market Equilibrium At Each Market Center

End-Use Gas Demand + Power Generation Gas Demand +
Pipeline and Lease and Plant Gas + Pipeline Exports + Mexican
Exports + LNG Exports + Storage Injections

=

Gas Production + Pipeline Imports + LNG Imports + Mexican
Imports + Storage Withdrawals + Balancing Item

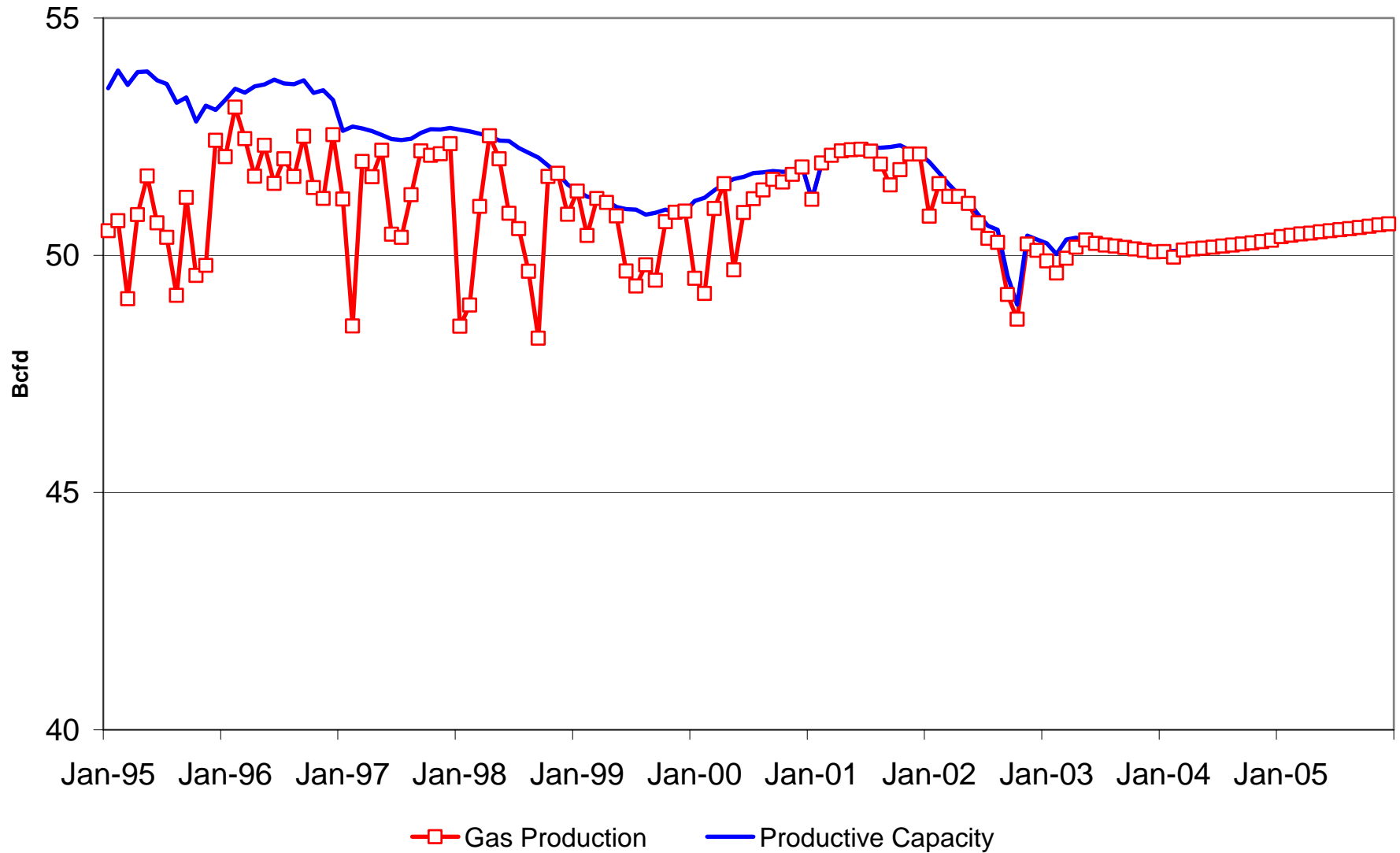
Gas Transmission Network



Uses of the EEA Model

- Facility investment decisions
 - Own investment
 - Competitor's investment
- Gas supply planning
- Gas and oil resource economics
- Evaluate weather risk
- Gas infrastructure requirements
- Due diligence for M&A activity
- Certification and rate case proceedings
- Policy studies

Lower-48 Dry Gas Production vs. Dry Gas Productive Capacity



Henry Hub Natural Gas Price Futures and Forecast

